Bring it all together: the fusion between PDM & PLM

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About the speaker
The RIGHT tool for the job
ROLE
OF
PDM | PLM
Efficient collaboration across departments and systems

PLM integrations people, data, systems and processes

New Product Introduction

Change Management

Non-conformances

Specification

Engineering

Preproduction

Production

Service

Quotes, Ideas, Requirements, Specification, Schedule, Feasibility, Concept...

✓ Geometry
✓ Drawings
✓ Simulation
✓ Calculations
✓ CAD structure

EBOM, MBOM, Change Management, Quality Management, Purchasing, Pricing, Supplier Qualification, Non Conformances, Data Exchange, Supplier Audits, External Approvals, Claims, Compliance, Design Review, Maintenance & Repairs, PQP, SCAR, ...
Manage **engineering data** to enable concurrent engineering

Drawings, Models, Assemblies with metadata & related libraries

Used by **experts** who expect full coverage of their CAD design tools’ capabilities

Owned by Engineering

Seamless integration in engineering tools is key
Manage the product lifecycle **end-to-end** from early concept through engineering and production to services

**Connects** people, data, processes and systems to provide transparency & traceability

**Ease-of-use** and **automated processes** enable efficiency gains for anyone

**Simplicity, Accessibility and Flexibility** are key
### Product Data Management

- Engineering Data Management
- Document Versioning
- Seamless CAD Integration
- Copy Design
- Bill of Documents
- Bill of Materials
- Engineering Change Orders

### Product Lifecycle Management

- Bill of Materials
- Change Management
- Non-Conformances
- Quality Management
- NPI
- Product Costing
- Supplier Collaboration

### Automation & Processes

- Document Centric
COMBINED
BEST-IN-CLASS
SOLUTIONS
Re-use Engineering Knowledge by delivering powerful tools and facilitate change management, tasks, requirements, bids

Utilize flexible resources by connecting global sites as well as suppliers

Utilize flexible resources by connecting global sites as well as suppliers

PDM and CAD must be tightly integrated to leverage best design experience & synced releases

BEST PDM SOLUTION
Vault Professional

Tightly integrated in Autodesk’s suite of CAE tools, Vault provides a central repository for any engineering data. Its seamless integration in the user interface of Inventor reduces data management efforts for engineers to a minimum.

Connect enterprise systems to ensure smooth collaboration with other departments
Comprehensive Capabilities

User
- Search & Reuse
- Concurrent Design
- Multi-CAD Integrations
- Relationships Tracking
- Project Organization

Process
- Publishing & Viewing
- Content Management
- Revision Management
- Approvals
- Engineering Change Orders

Enterprise
- Security
- Reporting
- Web Based & Remote Access
- Multi-Site Replication
- Enterprise Integrations
Bring products to market on time, budget, quality and functionality

Manage and track all change activities from catalyst to implementation across all disciplines

Single source of truth across multiple disciplines (Mechanic, E&E, Software)

Provide latest product data to all stakeholders

Ensure quality, quantity and timing of deliveries by external partners

Implement quality planning, quality management and quality assurance to comply with ISO standards and to prevent costly changes

Core PLM processes are provided in a ready-to-use cloud environment, enabling a quick start and short time to value.

Using graphic administration utilities, customers can adjust these processes to custom needs or even add new business processes definitions – without the need of software migration.
Have latest product design at hand at any time
Connect all engineering disciplines
Digitize & Connect anything

AUTODESK FUSION LIFECYCLE

Next Generation PLM
Prevent delays in business processes
React on delays properly & on time
Efficient Global Collaboration
Smart solutions to address unique challenges

On-Premise
Engineering Data

- Integrated in CAD User Interface
- Local file storage for best performance
- Best support for CAD possible
- Software release to match CAD

Files remain in Intranet

Cloud
Metadata & Processes

- Easily Accessible
  - Instant worldwide deployment
- No software installation and maintenance
- Flexible & automated business processes

Global Process Efficiency
Why offer a combination of two solutions instead of one?
INTEGRATION
SOLUTION
Out of the Box integration

Vault & Fusion Lifecycle Connection Use Cases

- New Product Introduction/Development
- BoM, files push to FLC
- Change Management FLC to Vault

Efficient and consistent integration

- Easy to configure
- Simple install
- Compliant with standard schemas (Forge, FLC V3 API)
- Compatibility with Vault 2019, 2020+
Standard Integration Capabilities

Create project in Vault on defined status

Create BOM on release

Revise file on defined status

+ upload attachments

Upload new attachment version on release

Job Processor

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Create BOM on release

Revise file on defined status
Case #1 New Product Introduction (NPI/NPD)

Fusion Lifecycle in control of the whole product development process

1. Idea/product/project begins in FLC
   - Follows NPI/NPD process

2. When “ready”, FLC pushes data into Vault
   - Creates project structure
   - Shares information

3. Design begins, iterates, check in/out with Vault
   - New CAD data
   - Copy Design

4. When ready, data is pushed to FLC
   - BOM Structure, viewable (non-native) geometry
   - Qty, Titles, Desc, and attachment
New Product Introduction Workflow
Autodesk Vault & Fusion Lifecycle Connector

Peter Van Avondt
Technical Sales Specialist D&M
1. Issues from Field, Supplier, Customer, shop floor
   - Capture issues digitally

2. Routed through Quality to Engineering Change
   - Follow a pre-defined process
   - PR > CR > CO

3. Change Management & Approval with Vault
   - Revise File on CO status change
   - Now ECO’s needed

4. Close loop Change Management
   - New Item information (Qty, Structure)
   - New viewable
Change Management Workflow
Autodesk Vault & Fusion Lifecycle Connector

Peter Van Avondt
Technical Sales Specialist D&M
Extended Capabilities
Using Rest API or Integration Hub

A. Development Framework (API)
- Requires Coding
- Support for On-site and On-Premise
- Use SOAP, REST

B. Integration Hub (Jitterbit)
- Little Coding
- Costly to implement
- Standard connectors
- Support for On-site and On-Premise
Extended Integration Capabilities

- **Create project in Vault on defined status**
- **Transfer Engineering tasks**
- **Transition upon completion**
- **Transfer supporting docs**

Create BOM on release + upload attachments

- **Title**
- **Description**
- **Quantity**

Create ECO or Change Project + attach records

**Change Order**

**Change Request**

**Problem Report**

**Tasks**

**Transfer Engineering Change tasks**

**Transition upon completion**

**Upload new attachment version on release**

**New Revision**
Case #3 Advanced Change Management & Engineering Task Management

Vault’s Engineering Change Orders and Tasks integrated in the broader Change Management

1. Change Management & Approval with Vault
   - Engineering Change Order or Change Project folder
   - Collects all involved files

2. Engineering Task Management
   - Feed Task information to Engineers
   - Using Custom Objects in Vault

3. Close loop status management
   - ECO and Task status feedback

- Create ECO or Change Project + attach records
- Transition upon completion
- Transfer Engineering Change tasks
- Transition upon completion
- Upload new attachment version on release

Job Processor

Tasks

ECO

ITEM

Ipt.DWF

Change Order

Change Request

Problem Report
Combined Best-in-class Solutions

**On-Premise**
- Engineering Data
  - Integrated in CAD User Interface
  - Local file storage for best performance
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  - Software release to match CAD

**Cloud**
- Metadata & Processes
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    - Instant worldwide deployment
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**Global Process Efficiency**
The RIGHT tools for the job…
… tight together